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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,697	07/21/2003	Kazunari Yamauchi	0033-0891P	4390

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EXAMINER

TRAN, NHAN T

ART UNIT	PAPER NUMBER
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2622

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/23/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/622,697

Applicant(s)

YAMAUCHI, KAZUNARI

Examiner

Nhan T. Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/21/2003 - 9/14/2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statements (IDS) submitted on 7/21/2003, 11/20/2003, 1/19/2005, 2/9/2005 and 9/14/2005 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner.

Claim Objections

3. Claims 6, 11 are objected to because of the following informalities:

Claim 6 recites "**the outside**" in line 3 of claim 6. This limitation should be corrected to read as -- **an outside** --.

Claim 11 recites, "**said exposure means detected**" in line 10 of claim 11. This limitation should be corrected to read as -- **said exposure level detected** --.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawahara (US 2001/0019364 A1).

Regarding claim 1, Kawahara discloses a portable device (an electronic camera, paragraph [0242]) having an image pick-up unit (161 shown in Fig. 11) picking-up an image of an object and outputting image information (see [0150]), comprising:

a light source (flash unit 5) emitting light to said object (Fig. 11);

control means (combined circuits 4 and 332-336 shown in Fig. 11) for controlling an emission by said light source based on quantity of light emission, in an image pick-up mode (see [0151]-[0154]);

exposure detecting means (combined circuits 1 and 336 shown in Fig. 11) for detecting exposure level based on said image information; wherein said control means includes light emission quantity determining means (4) for determining said quantity of light emission, comparing means (334, 336) for comparing said exposure level detected by said exposure detecting means with said light source emitting light (S337-S380 shown in Fig. 13A) based on said light emission quantity determined by said light emission quantity determining means and said exposure level detected by said exposure detecting means with said light source not emitting light (without emission of

flash at S373-S375 shown in Fig. 13A); and said light emission quantity determining means determines said light emission quantity (S384-S389 shown in Fig. 13B) based on a result of comparison by said comparing means (see [0155] – [0179]).

Regarding claim 2, Kawahara clearly discloses that said comparing means detects a difference by comparing said exposure level detected by said exposure detecting means with said light source emitting light based on said light emission quantity determined by said light emission quantity determining means and said exposure level detected by said exposure detecting means with said light source not emitting light (see Figs. 13A & 13B, [0157]-[0168]); and said light emission quantity determining means determines, based on said difference detected by said comparing means, said light emission quantity to have said exposure level match an optimal level (see Fig. 13B and [0168]-[0175], wherein “an optimal level” is the level preset for each of proper exposure, underexposure and overexposure situation as described in S385, S386 and S387).

Regarding claim 3, as analyzed in claim 2 above, said optimal level is a target exposure level (a proper exposure level obtained by increasing, decreasing or maintain a current exposure level as shown in S385-S387) for said image information (see Fig. 13B).

Regarding claim 4, it is seen in Kawahara that said comparing means and said light emission quantity determining means are activated repeatedly until said exposure level detected by said exposure detecting means with said light source emitting light based on said light emission quantity determined by said light emission quantity determining means and said exposure level detected by said exposure detecting means immediately thereafter with said light source not emitting light match said optimal level (see Figs. 13A & 13B and note that said comparing means and said light emission quantity determining means are activated repeatedly by virtue of a next image capture sequence where the user initiates another image capture, thereby repeating the exposure control sequence).

Regarding claim 5, Kawahara further discloses a storing unit (recording unit 13 in Fig. 11) storing image data corresponding to said image information; wherein when said exposure level detected by said exposure detecting means matches said optimal level (proper exposure is obtained), said image data is stored in said storing unit (see [0179] and [0008]).

Regarding claim 11, Kawahara also discloses an exposure adjusting device (Figs. 11, 13A & 13B), comprising:

exposure detecting means (combined circuits 1 and 336) for detecting an exposure level based on image information obtained by picking-up an image of an object (Fig. 11);

light emission quantity determining means (4) for determining, in an image pick-up mode, a light emission quantity of a light source provided in advance (preset quantity of light as preliminary flash) for emitting light to said object (S377 in Fig. 13A); and comparing means (combined circuits 334 and 336) for comparing said exposure level detected by said exposure detecting means with said light source emitting light (S377-S380 in Fig. 13A) based on said light emission quantity determined by said light emission quantity determining means and said exposure means detected by said exposure detecting means with said light source not emitting light (without light emission at S373-S375 in Fig. 13A); wherein said light emission quantity determining means determines said light emission quantity (by increasing, decreasing or maintain the current flash quantity in S285-S387 shown in Fig. 13B) based on a result of comparison by said comparing means (see [0157] – [0179]).

Regarding claims 12-14, the limitations of these claims are also met by the analyses of claims 2-4, respectively.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 6, 8, 10, 16 & 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 2001/0019364 A1) in view of Numata et al. (US 6,654,062 B1).

Regarding claim 6, since Kawahara discloses that the portable device is an electronic camera (video or still camera as described in [0242], inherently included in the camera of Kawahara is a shutter key operated from an outside (note that "outside" is understood as a shutter key located on the camera body which is outside of the internal components) to instruct storage of said image data to said storing unit (recording unit 13 in Fig. 11).

Kawahara does not explicitly disclose that when said exposure level detected by said exposure detecting means matches said optimal level, whether said shutter key is operated or not is determined.

However, Numata teaches the use of a shutter key button (37) of an electronic camera (Fig. 2) to trigger a detection of exposure level for determining a proper exposure value and to instruct storage of image to a storing unit (memory card) as shown in Fig. 7 at steps S9-S19, col. 6, lines 61-65 and col. 8, lines 12-18. Such operation of the shutter key would conveniently provide the user an excellent control over the camera during a photographing session for when to capture and record an image while effective utilizing power supply of the camera for operating exposure control processing.

Therefore, it would have been obvious to one of ordinary skill in the art to configure the electronic camera in Kawahara in view of the teaching of Numata such that whether a shutter key is operated or not is determined when said exposure level detected by said exposure detecting means matches optimal level so as to conveniently provide the user an excellent control over the camera during a photographing session for when to capture and record an image while effectively utilizing power supply of the camera for operating exposure control processing.

Regarding claim 8, Kawahara discloses that said control means includes starting state setting means for setting said light source (S372-S376 in Fig. 11) to a non-emission state at a start of said image pick-up mode (see [0157]-[0162]).

Kawahara is silent about start level determining means for determining whether said exposure level detected by said exposure detecting means in said non-emission state set by said starting state setting means matches said optimal level or not; wherein when it is determined by said start level determining means that the exposure level does not match, said light emission quantity determining means and said comparing means are activated.

Numata teaches that an exposure level in a non-emission state (no flash is emitted) is detected by an exposure detecting means (step S2 in Fig. 7) for determining whether or not the exposure level is smaller than an optimal value required for capturing an image without emission of flash unit. If the exposure value is smaller than the optimal value, the flash is activated (step S10) for further determination of exposure

level prior to recording the image (see Numata, Fig. 7 and col. 5, line 66 – col. 6, line 65). The determination at step S2 in Fig. 7 would reduce unnecessary exposure processing with flash emission when ambient light is sufficient enough to capture a good image.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera in Kawahara in view of the teaching of Numata to arrive at the Applicant's claimed invention so as to enhance the exposure control by reducing unnecessary exposure processing with flash emission when ambient light is sufficient enough to capture a good image as suggested in step S2 in Fig. 7 of Numata above.

Regarding claim 10, Although Kawahara does not disclose that the image pick-up mode includes a close-up mode and non-close-up mode that are switchable, such lack of teaching is compensated by Numata as shown in Fig. 4 in which the camera includes both close-up mode and normal mode (non-close-up mode) to allow the user to switch to a close-up mode from a normal mode and vice versa depending on the need at the time of photographing (see Fig. 4 and col. 4, lines 56-60).

Therefore, it would have been obvious to one of ordinary skill in the art to further combine teachings of Kawahara and Numata to provide the camera with both close-up mode and non-close-up mode that are switchable so as to allow the user to take not only normal images but also close-up images as desired at the time of photographing.

Regarding claims 16 & 18, the limitations of these claims are also met by the analyses of claims 8 & 10, respectively.

6. Claims 7 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 2001/0019364 A1) in view of Medwick et al. (US 7,092,029 B1).

Regarding claim 7, although Kawahara discloses that the light emission is adjusted by increasing, decreasing or remain the light quantity (S385-S387 in Fig. 13B) corresponding to each of a plurality of said differences based on said difference detected by said comparing means, Kawahara does not explicitly disclose a looked-up table having light emission quantity registered to read corresponding light emission quantity.

Medwick teaches an exposure control for an electronic camera in which a look-up table (Fig. 6) is registered in the camera memory with a plurality of light emission quantities (strobe durations and associated power values) corresponding to each of detected luminance levels of an object, and the light quantity emission is read to correct exposure according the detected luminance so that the visual quality of exposed image is accurately improved (see Medwick, Fig. 6, col. 7, lines 30-45 and col. 2, lines 21-32).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera of Kawahara in view of the teaching of Medwick to implement the light emission quantity determining including a look-up table having said light emission quantity registered corresponding to each of a plurality of said differences, and the look-

up table is based on difference detected by said comparing means to read corresponding said light emission quantity so that the visual quality of exposed image is accurately improved as taught by Medwick above.

Regarding claim 15, the limitations of this claim are also met by the analysis of claim 7.

7. Claims 19 & 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 2001/0019364 A1) in view of Terunuma Hiroshi (JP07-072536).

Regarding claim 19, Kawahara discloses a portable device (an electronic camera shown in Figs. 11-13B) having an image pick-up unit (161) picking-up an image of an object and outputting image information (see [0242] and [0150]), comprising:

- a light source (flash unit 5 in Fig. 11) emitting light to said object;

- a storing unit (recording unit 13 in Fig. 11) storing image data corresponding to said image information (see [0008]);

- a shutter key (see [0242] in which "a shutter key" is inherently included in such an electronic camera in order for the camera to function);

- control means (camera controller executes the flowchart as shown in Figs. 13A & 13B) storing image data corresponding to said image information in said storing unit in response to an operation of said shutter key (see [0008]), and starting emission of light

of said light source in response to an exposure level based on said image information when an image pick-up mode is set (see Figs. 13A & 13B and [0151] – [0179]).

Kawahara fails to teach that said emission of light of said light source is started *regardless* of an operation of said shutter key when an image pick-up mode is set.

However, in a reference to Terunuma, a flash device (7, 9) is automatically emitted light regardless of a shutter operation so as to enable the camera to photograph an object where image shadow is reduced (see Terunuma, Abstract).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the camera of Kawahara such that said emission of light of said light source is started in response to the exposure level based on said image information *regardless* of an operation of said shutter key when an image pick-up mode is set so as to effectively reduce image shadow upon photographing.

Regarding claim 20, it is inherent in the combined teachings of Kawahara and Terunuma that said control means stops emission of said light source in response to the exposure level based on said image information regardless of the operation of said shutter key, in a state after emission of said light source is started (it is noted that the light emission of the flash device in Terunuma is *inherently stopped* after it emitted light).

8. Claims 21 & 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara (US 2001/0019364 A1) in view of Terunuma Hiroshi (JP07-072536) and in further view of Yamazaki (US 6,351,606 B1).

Regarding claim 21, the combined teachings of Kawahara and Terunuma as analyzed in claim 20 do not disclose a display unit for displaying various pieces of information; wherein said control means displays image data corresponding to said image information on said display unit when said image pick-up mode is set.

Yamazaki teaches an electronic camera having a display unit (LCD 24) that displays a plurality of information (i.e., exposure warning information) in addition to image information when the image pick-up mode is set so that the user can be timely informed regarding exposure condition of the image capture and can also view captured images on the display unit for confirmation (see Yamazaki, Figs. 1-3, col. 5, lines 35-48 and col. 8, lines 41-44).

Therefore, it would have been obvious to one of ordinary skill in the art to combine teachings of Kawahara, Terunuma and Yamazaki to arrive at the Applicant's claimed invention by providing a display unit for displaying various pieces of information, wherein said control means displays image data corresponding to said image information on said display unit when said image pick-up mode is set so that the user would be timely informed regarding exposure condition of the image capture and would be also able to view captured images on the display unit for confirmation as taught by Yamazaki above.

Regarding claim 22, the limitations of this claim are also met by the analysis of claim 21.

9. Claims 9 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawahara and Numata et al. as applied to claim 8 and in further view of Yamazaki (US 6,351,606).

Regarding claim 9, Kawahara and Numata fails to teach that when it is determined by said start level determining means that the exposure level does not match, said light emission quantity determining means determines said light emission quantity to be the maximum quantity that can be emitted by said light source.

Yamazaki teaches an exposure control for an electronic camera in which when an exposure level does not match to a preset value (under-exposure shown in S14 in Fig. 4), the camera controls a flash unit to emit light at a maximum amount (full emission in S16, S21 in Fig. 4) to obtain best exposure possible for image recording (see Yamazaki, Figs. 3 & 4 and col. 7, lines 16-39).

Therefore, it would have been obvious to one of ordinary skill in the art to further modify the camera in Kawahara and Numata in view of the teaching of Yamazaki by configuring said light emission quantity determining means to determine said light emission quantity to be the maximum quantity that can be emitted by said light source when it is determined by said start level determining means that the exposure level

does not match so as to provide best exposure possible for image recording as taught by Yamazaki.

Regarding claim 17, the limitations of this claim are also met by the analysis of claim 9.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhan T. Tran whose telephone number is (571) 272-7371. The examiner can normally be reached on Monday - Friday, 8:00am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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A handwritten signature in black ink, appearing to read 'Nhan Tran', with a stylized, cursive script.

NHAN T. TRAN
Patent Examiner